What Is Claimed Is:

1. A tear secretion quantity examination system
comprising: a moisture evaporation quantity detection unit
5   for detecting the moisture evaporation quantity from a
subject's eye with a humidity sensor; and operation means
for computing evaluation parameters of the tear secretion
quantity based on a detection signal of said moisture
evaporation quantity detection unit, wherein
10   the operation means approximates the attenuation
portion of saw-tooth responses appearing for each blink in
a tear evaporation profile in which the detection value
f(t) obtained with the humidity sensor is plotted against
the time t, by the exponential function (1)
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$$f(t) = Ae^{-kt} + B \qquad (1)$$

where A is an initial variation value, k is an attenuation
ratio, and A, k, and B are respectively constants, and
20 computes the initial variation value A and the attenuation
ratio k as said evaluation parameters.

2. The tear secretion quantity examination system
according to claim 1, wherein a plurality of healthy
25 people with a normal tear secretion quantity and a
plurality of dry-eye patients with a small tear secretion

quantity are selected as subjects, the accumulated data establishing the correspondence between the initial variation value A calculated and the attenuation ratio k calculated for each subject and the dry-eye degree of each

5   subject are referred to by the operation means, and the dry-eye degree of the subjects is calculated from the initial variation value A and the attenuation ratio k of said subjects, based on said accumulated data.

10   3.   A tear secretion quantity evaluation method comprising the steps of:

obtaining a tear evaporation profile by plotting against the time t the detection values f(t) obtained while subjects blink with the prescribed intervals, by

15 using the humidity sensor of the tear secretion quantity examination system according to claim 1,

computing the initial variation value A and the attenuation ratio k by approximating the attenuation portion of saw-tooth responses appearing for each blink in

20 said tear evaporation profile by the exponential function (1)

$$f(t) = Ae^{-kt} + B \qquad (1)$$

25 where A is an initial variation value, k is an attenuation ratio, and A, k, and B are respectively constants; and

evaluating the tear secretion quantity based on the calculated initial variation value A and the calculated attenuation ratio k.

4. The tear secretion quantity evaluation method according to claim 3, wherein the initial variation value A and the attenuation ratio k are calculated for a plurality of healthy people with a normal tear secretion quantity and a plurality of dry-eye patients with a small tear secretion quantity as subjects, data establishing the correspondence between the initial variation value A calculated and the attenuation ratio k calculated for each subject and the dry-eye degree of each subject are accumulated, while the initial variation value A and the attenuation ratio k of the subjects are calculated, and the dry-eye degree of the subjects is calculated from the calculated initial variation value A and the calculated attenuation ratio k of the subjects, based on said accumulated data.

5. A tear secretion quantity examination system comprising: a moisture evaporation quantity detection unit for detecting the moisture evaporation quantity from a subject's eye and operation means for computing evaluation parameters of the tear secretion quantity based on a

detection signal of said moisture evaporation quantity detection unit, wherein

said operation means computes, as said evaluation parameters, the parameters representing the difference

5 between a state prior to administration and a state after the administration in the case in which an artificial tear fluid is dropped in the subject's eye, with respect to a tear evaporation profile in which a detection value obtained with the moisture evaporation quantity detection

10 unit is plotted against the time.

6. A tear secretion quantity examination system, wherein operation means computes, as evaluation parameters, the difference between the detection values obtained

15 before and immediately after administration or the time variation ratio of the detection values immediately after administration in the case in which an artificial tear fluid is dropped in the subject's eye, with respect to a tear evaporation profile in which a detection value

20 obtained with the moisture evaporation quantity detection unit is plotted against the time.

7. The tear secretion quantity examination system according to claim 5, wherein the moisture evaporation

25 quantity detection unit comprises: a tubular body comprising open portions at the lower and upper ends

thereof, the lower open portion surrounding the eye; a gas introducing channel for introducing a carrier gas into the tubular body; and a humidity sensor provided inside the tubular body.

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8.   The tear secretion quantity evaluation system according to claim 5, wherein a plurality of healthy people with a normal tear secretion quantity and a plurality of dry-eye patients with a small tear secretion quantity are selected as subjects, and the operation means refers to accumulated data establishing the correspondence between the difference between the detection values obtained before and immediately after administration of said artificial tear fluid or the time variation ratio of the detection values immediately after administration for each subject and the dry-eye degree of each subject, and the dry-eye degree of the subjects is computed from the difference between the detection values obtained before and immediately after administration of said artificial tear fluid or the time variation ratio of the detection values immediately after administration to the subjects, based on said accumulated data.

9.   A tear secretion quantity evaluation method comprising the steps of:

detecting the moisture evaporation quantity from a subject's eye before and after administration in the case in which an artificial tear fluid is dropped in the subject's eye, by using the moisture evaporation quantity

5   detection unit of the tear secretion quantity examination system according to claim 1;

finding with the operation unit a tear evaporation profile in which the detected values are plotted against the time; and

10   computing the parameters representing the difference between a state prior to administration and a state after the administration in the case in which an artificial tear fluid is dropped in the subject's eye, with respect to the profile.

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